This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claim 1. (Previously amended) An assay for determining the cyclooxygenase- 2 activity of a composition comprising a human osteosarcoma cell preparation, a sample and arachidonic acid, the assay comprising the steps of:

(a) preparing the composition by adding

(1) the human osteosarcoma cell preparation,

(2) the sample, said sample comprising a putative cyclooxygenase-2 inhibitor, and

(3) the arachidonic acid; and

(b) determining the amount of prostaglandin E_2 produced in step (a).

Claim 2. (Previously amended) An assay according to claim 1

wherein the cell preparation comprises 10^3 to 10^9 whole cells of osteosarcoma per cc, or 50 to 500 ug of osteosarcoma microsomes per ml of preparation; and 0.1 to 50 µl of arachidonic acid per ml of preparation.

Claim 3. (Previously amended) An assay for determining the cyclooxygenase-2 activity of a composition comprising a human osteosarcoma cell preparation, a sample and arachidonic acid, the assay comprising the steps of:

(a) preparing the composition by adding

(1) the human osteosarcoma cell preparation,

(2) the sample, said sample comprising a putative cyclooxygenase-2 inhibitor, and

(3) the arachidonic acid; and

(b) determining the amount of prostaglandin E_2 produced in step (a)

(c) correlating the amount of prostaglandin E_2 produced with cyclooxygenase-2 activity,

wherein the osteosarcoma cell preparation consists essentially of osteosarcoma 143.98.2 microsomes.

Claim 4. (Original) An assay according to claim 3 wherein the osteosarcoma 143.98. 2 microsomes are substantially free of endogenous arachidonic acid.

Claim 5. (Original) An assay according to claim 3 wherein the microsomes are contacted with an amount of delipidized serum protein effective to reduce the amount of endogenous arachidonic acid in the microsomes by a factor of at least approximately 2.

Claim 6. (Previously amended) An assay for determining the cyclooxygenase-2 activity of a composition comprising a human osteosarcoma cell preparation, a sample and arachidonic acid, the assay comprising the steps of:

(a) preparing the composition by adding

(1) the human osteosarcoma cell preparation,

(2) the sample, said sample comprising a putative cyclooxygenase-2 inhibitor, and

(3) the arachidonic acid; and

(b) determining the amount of prostaglandin E_2 produced in step (a),

(c) correlating the amount of prostaglandin E_2 produced with cyclooxygenase-2 activity,

wherein the human osteosarcoma cell preparation contains no recombinant vector.

Claim 7. (Previously amended) An assay for determining the cyclooxygenase-2 activity of a composition comprising a human osteosarcoma cell preparation, a sample and arachidonic acid, the assay comprising the steps of:

(a) preparing the composition by adding

(1) the human osteosarcoma cell preparation,

(2) the sample, said sample comprising a putative cyclooxygenase-2 inhibitor, and

(3) the arachidonic acid; and

(b) determining the amount of prostaglandin E_2 produced in step (a)

(c) correlating the amount of prostaglandin E_2 produced with cyclooxygenase-2 activity,

wherein the osteosarcoma cell preparation consists essentially of whole cells of osteosarcoma 143.98.2.

Claim 8. (Canceled).

Claim 9 and 10. (Canceled)

Claim 11. (Previous amended) An assay for determining the cyclooxygenase-1 activity of a composition comprising the steps of:

(a) preparing the composition adding

(1) the COX-1 cell preparation,

(2) the sample, said sample comprising a putative cyclooxygenase-1 inhibitor;

(3) the arachidonic acid; and

(b) determining the amount of prostaglandin E_2 produced in step (a)

(c) correlating the amount of prostaglandin E_2 produced with cyclooxygenase-2 activity.

Claim 12. (Original) An assay according to claim 11 wherein the COX-1 cell preparation consists essentially of whole cells of U-937.

Claim 13. (Original) An assay according to claim 11 wherein the COX-1 cell preparation consists essentially of U-937 microsomes.

Claim 14. (Previously amended) An assay according to claim 11

wherein the cell preparation comprises 10^5 to 10^8 whole cells of U-937 per cc, or 1 to 10 mg of U-937 microsomes per ml of preparation; and

0.1 to 50 µl of arachidonic acid per ml of preparation.

Claim 15. (Original) An assay according to claim 14 wherein the cell preparation comprises $8x10^8$ to $1.5x10^6$ whole cells of U-937 per cc, or 1 to 5 mg of U-937 microsomes per ml of preparation.

Claims 16 to 18 (Canceled)

Claim 19. (Previously amended) A transformed host cell that expresses cyclooxygenase-2 as shown in SEQ. ID. NO: 10 comprising:

(a) a mammalian or eukaryotic expression vector; and

(b) a sequence encoding human cyclooxygenase-2 comprising bases 97 to 1909 of SEQ. ID. NO: 11 or encodes protein of SEQ. ID. NO: 10.

Claims 20 to 21 (Canceled).

Claim 22. (Previously amended) Human cyclooxygenase-2 cDNA comprising the coding region which is bases 97 to 1909 of SEQ. ID. NO: 11.

Claim 23. (Previously amended) Recombinant human cyclooxygenase-2 which is shown in SEQ. ID. NO: 10.

Claim 24. (Previously amended) An isolated human cyclooxygenase-2 which is shown in SEQ. ID. NO: 10.

Claim 25. (Previously amended) Purified human cyclooxygenase-2 which is shown in SEQ. ID. NO: 10.

Claim 26. (Previously amended) The transformed host cell according to claim 19 wherein the expression vector is a vacinia or baculovirus vector.

Claim 27. (Previously amended) The transformed host cell according to claim 19 wherein the cyclooxygenase-2 is expressed in COS-7 cells.